

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated August 2, 2005, has been received and its contents carefully reviewed.

Claims 1-20 and 22-41 are rejected to by the Examiner. Applicants wish to thank the Examiner for the indication of allowable subject matter of claim 21. Applicants note that this application contains claims 1-42. However, claim 42 is not addressed by the Office Action. Claims 1-42 remain pending in this application. Applicants expressly request examination of claim 42, which appears on page 35 of the specification as filed.

In the Office Action, claims 1-13, 15-16, 18-20, 22-24 and 29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' related art ("ARA") in view of U.S. Published Patent Application No. 20050018108 to Okumura et al. (hereinafter "Okumura"). Claims 14, 17, 25-28, and 30-41 are rejected under 35 U.S.C. § 103(a) as being unpatentable over ARA in view of Okumura in further view of U.S. Patent No. 5,777,707 to Masaki et al. ("Masaki '707"), U.S. Patent No. 5,757,452 to Masaki et al ("Masaki '452), U.S. Patent No. 5,642,176 to Abukawa et al. ("Abukawa"), U.S. Patent No. 5,142,392 to Ueki et al. ("Ueki"), and U.S. Patent No. 6,707,067 to Zhong et al. ("Zhong"). The rejection of claims 1-20 and 22-41 is respectfully traversed and reconsideration is requested.

Claims 1-7 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, "each of R, G, B, and W pixels is arranged to be symmetric with respect to the gate line to adjacent R, G, B, and W pixels." None of the cited references including ARA and Okumura, singly or in combination, teaches or suggests at least this feature of the claimed invention. In the Office Action, the Examiner cites Okumura for the proposition that "it was well known or conventional to use dedicated white pixels as [Okumura] teaches it was conventional." Office Action, p. 2. More precisely, paragraph [0016] of Okumura states "Conventionally, formation of one pixel with four dots, being red, green, blue, and white has been carried out for transmissive type liquid crystal devices" However, Applicants note that nothing in either reference teaches the structural feature of at least claim 1 of the present application in which each of the R, G, B and W pixels is arranged to be symmetric with respect to the gate line to adjacent R, G, B and W pixels. Nothing in the teachings of Okumura teaches

or suggests such layout. Accordingly, Applicant respectfully submits that claim 1 and claims 2-7, which depend from claim 1, are allowable over the cited references.

Similarly, claims 8 and 9 are over the cited references in that each of these claims recites a combination of elements including, for example, “wherein the R, G, B, and W subpixels are arranged in a zigzag pattern in a data line direction, the subpixels of adjacent pixels being arranged in a different direction to compensate a main viewing angle of each of R, G, B, W subpixels.” None of the cited references including ARA and Okumura, singly or in combination, teaches or suggests at least this feature of the claimed invention. In the Office Action, the Examiner cites Okumura for the proposition that “it was well known or conventional to use dedicated white pixels as [Okumura] teaches it was conventional.” Office Action, p. 2. More precisely, paragraph [0016] of Okumura states “Conventionally, formation of one pixel with four dots, being red, green, blue, and white has been carried out for transmissive type liquid crystal devices” However, Applicants note that nothing in either reference teaches the structural feature of at least claim 8 of the present application in which the R, G, B, and W subpixels are arranged in a zigzag pattern in a data line direction and the subpixels of adjacent pixels are arranged in a different direction to compensate a main viewing angle of each of R, G, B, W subpixels. Nothing in the teachings of Okumura teaches or suggests such layout. Accordingly, Applicant respectfully submits that claim 8 and claim 9, which depends from claim 8, are allowable over the cited references.

Claims 10-28 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, “a first set of pixels of different colors, each of the pixels having a data line along a side thereof and a gate line along a side thereof, wherein one of the pixels is a white (W) pixel, each pixel of the first set of pixels having at least one pair of first electrodes for providing a horizontal electric field therebetween; and a second set of pixels of different colors, each of the pixels having a data line along a side thereof and a gate line along a side thereof, wherein one of the pixels is a white (W) pixel, each pixel of the second set of pixels having at least one pair of first electrodes for providing a horizontal electric field therebetween” None of the cited references including ARA and Okumura, singly or in combination, teaches or suggests at least this feature of the claimed invention. In the Office Action, the Examiner cites Okumura for the proposition that “it was well known or conventional to use dedicated white pixels as [Okumura] teaches it was conventional.” Office Action, p. 2.

More precisely, paragraph [0016] of Okumura states “Conventionally, formation of one pixel with four dots, being red, green, blue, and white has been carried out for transmissive type liquid crystal devices” However, Applicants note that nothing in either reference teaches the structural feature of at least claim 10 of the present application. Accordingly, Applicant respectfully submits that claim 10 and claims 11-28, which depend from claim 10, are allowable over the cited references.

In the Office Action, the cites Masaki ‘707, Masaki ‘452, Abukawa, Ueki, and Zhong as teaching the features of claims 14, 17, and 25-28. Applicants however note that none of these references cures the deficiencies of the ARA and Okumura, as discussed above with respect to independent claim 10. Therefore, Applicants do not address the substance of the rejection of claims 14, 17, and 25-28, as these claims are allowable based solely on their dependence on allowable independent claim 10.

Claims 29-42 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, “wherein the first set of pixels and the second set of pixels are adjacent to each other and the third set of pixels and the fourth set of pixels are adjacent to each other and wherein the white pixels are not adjacent to each other, and wherein the white pixels of each of the first to fourth sets of pixel are not in a line” None of the cited references including ARA and Okumura, singly or in combination, teaches or suggests at least this feature of the claimed invention. In the Office Action, the Examiner cites Okumura for the proposition that “it was well known or conventional to use dedicated white pixels as [Okumura] teaches it was conventional.” Office Action, p. 2. More precisely, paragraph [0016] of Okumura states “Conventionally, formation of one pixel with four dots, being red, green, blue, and white has been carried out for transmissive type liquid crystal devices” However, Applicants note that nothing in either reference teaches the structural feature of at least claim 29 of the present application. Accordingly, Applicant respectfully submits that claim 29 and claims 30-42, which depend from claim 29, are allowable over the cited references.

In the Office Action, the cites Masaki ‘707, Masaki ‘452, Abukawa, Ueki, and Zhong as teaching the features of claims 30-41. Applicants however note that none of these references cures the deficiencies of the ARA and Okumura, as discussed above with respect to independent claim 29. Therefore, Applicants do not address the substance of the rejection of claims 30-41, as these claims are allowable based solely on their dependence on allowable independent claim 29.




Applicants believe the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Respectfully submitted,

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